

Reg.No.: 

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|



VIVEKANANDHA COLLEGE OF ENGINEERING FOR WOMEN  
[ AUTONOMOUS INSTITUTION AFFILIATED TO ANNA UNIVERSITY, CHENNAI ]  
Elayampalayam – 637 205, Tiruchengode, Namakkal Dt., Tamil Nadu.

**Question Paper Code: 140006**

**B.E. /B.Tech. DEGREE END-SEMESTER EXAMINATIONS – JAN. 2026**

**Fourth Semester**

**Computer Science and Engineering**

**U23CTCP3 - VERBAL, QUANTITATIVE APTITUDE AND REASONING - II**

**(Common to EEE, ECE, IT, BT, BME & CST)**

**(Regulation 2023)**

Time: Three Hours

Maximum: 100 Marks

Answer ALL the questions

| Knowledge Levels<br>(KL) | K1 – Remembering   | K3 – Applying  | K5 - Evaluating |
|--------------------------|--------------------|----------------|-----------------|
|                          | K2 – Understanding | K4 – Analyzing | K6 - Creating   |

**PART – A**

Answer ALL Questions

(50 x 1 = 50 marks)

| Q. No. | Questions   | Marks | KL | CO  |
|--------|---|-------|----|-----|
| 1.     | If being polite is similar to being courteous, then what word is similar to being honest?<br>a) Benevolent<br>b) Genuine<br>c) Untruthful<br>d) Amiable | 1     | K2 | CO1 |
| 2.     | If an increase is the opposite of a decrease, then what is the opposite of permit?<br>a) Sanction<br>b) Authorize<br>c) Prohibit<br>d) Support          | 1     | K2 | CO1 |

3. If exercise leads to fitness, then what does reading lead to? 1 K2 CO1  
 a) Understanding  
 b) Well-being  
 c) Relaxation  
 d) Slumber
4. If a nut comes from a tree, then where does grain come from? 1 K2 CO1  
 a) Vegetation  
 b) Kernel  
 c) Harvest  
 d) Produce
5. If a clock measures time, then what does a thermometer measure? 1 K2 CO1  
 a) Heat level  
 b) Climate  
 c) Force  
 d) Atmosphere
6. If victory is the opposite of defeat, then what is the opposite of strength? 1 K2 CO1  
 a) Vigor  
 b) Feebleness  
 c) Might  
 d) Stamina
7. Due to the company's money problems, there has been a considerable \_\_\_\_\_ in the number of employees. 1 K2 CO1  
 a) rise  
 b) reduction  
 c) alteration  
 d) advancement
8. The recently recruited person, \_\_\_\_\_ considerable background in advertising, was hired without delay. 1 K2 CO1  
 a) that have  
 b) possessing  
 c) who has  
 d) which possess

9. Almost daily, she \_\_\_ her children to the school. 1 K2 CO1  
 a) propel  
 b) propelled  
 c) propels  
 d) propelling
10. Her \_\_\_ approach to her job resulted in her being promote 1 K2 CO1  
 a) Uninterested  
 b) industrious  
 c) inactive  
 d) relaxed
11. What profit percentage is gained if the cost of 24 similar items equals the revenue from selling 18 of those items? 1 K3 CO3  
 a) 25%  
 b) 30%  
 c) 16.66%  
 d) 33.33%
12. A merchant marked an item 35% higher than its purchase price. To secure an 8% profit, what percentage reduction should he offer on the marked price? 1 K3 CO4  
 a) 18%  
 b) 20%  
 c) 24%  
 d) None of the above
13. If a shopkeeper uses a false measure of 800 grams instead of a kilogram and sells his goods at a 20% premium over his cost price, what is his actual profit percentage? 1 K3 CO4  
 a) 25%  
 b) 20%  
 c) 50%  
 d) None of these
14. Samant received a 10% discount on a microwave oven's original price. He then sold it for a 30% gain on what he paid. What percentage profit did Samant achieve relative to the original price? 1 K3 CO4  
 a) 17%  
 b) 20%  
 c) 27%  
 d) 32%

15. By reducing the price of sugar by 20%, a customer could buy an extra 2.5 kg for Rs. 160. Determine the initial price of sugar per kg.
- a) 20  
b) 18  
c) 15  
d) 16
16. A shopkeeper sold 15 shirts for Rs. 2,340, incurring a loss of Rs. 60 in the process. What was the cost price of a single shirt?
- a) Rs.152  
b) Rs.160  
c) Rs.180  
d) Rs.230
17. If an article's cost price is 67% of its selling price, what is the profit %?
- a) 48  
b) 50  
c) 50.25  
d) 49.25
18. What would be the profit percentage if the profit, which is currently 20% based on the cost price, were calculated based on the selling price instead?
- a) 10%  
b) 20%  
c) 30%  
d) 16.67%
19. A person bought two phones at the same price. One was sold at a 20% profit, and the other at a 12% loss. What was the overall profit or loss percentage for the entire transaction?
- a) 16% profit  
b) 4% profit  
c) 16% loss  
d) 4% loss

20. Selling 15 balls for Rs 400 resulted in a loss equivalent to the cost price of 5 balls. What was the cost price of a single ball?  
a) 30  
b) 35  
c) 40  
d) 45
21. Person A can finish a task in 10 days, while Person B requires 15 days for the same task. If they work together, how many days will it take them to complete it?  
a) 7 days  
b) 4 days  
c) 3 days  
d) 6 days
22. If a team of 24 workers can complete a project in 40 days, how many workers are needed to finish the same project in 32 days?  
a) 30  
b) 40  
c) 25  
d) 50
23. Five individuals can weave five chair seats in five hours. Assuming a consistent rate, how many hours will it take one individual to weave one chair seat?  
a) 1 hour  
b) 15 hours  
c) 5 hours  
d) 10 hours
24. Four laborers can excavate a 20-meter trench in 6 days. How many meters of the trench can two laborers dig in one day?  
a)  $3\frac{2}{4}$   
b)  $1\frac{3}{2}$   
c)  $3\frac{2}{3}$   
d)  $1\frac{2}{3}$

25. A job was assigned to 25 workers to be completed in 24 days. After 15 days, 10 additional workers joined, and the work finished one day earlier than schedule. If no extra workers had been hired, how many days would the original 25 workers have taken to complete the entire job?
- 29.5 days
  - 24.6 days
  - 26.2 days
  - 21.7 days
26. Either 12 men or 18 women can harvest a field in 14 days. How many days will it take for 8 men and 16 women to harvest the same field?
- 5
  - 7
  - 8
  - 9
27. Person A can complete a task in 9 days, and Person B can do the same in 18 days. They start working together, but A leaves 3 days before the task is finished. How many days in total did it take to complete the work?
- 5 days
  - 8 days
  - 7 days
  - 11 days
28. A tank can be filled by one pipe in 20 minutes. Due to a leak, it takes 60 minutes to empty the full tank. If the tank is initially empty and both the filling pipe and the leak are active, how many minutes will it take to fill the tank?
- 35 minutes
  - 40 minutes
  - 45 minutes
  - 30 minutes
29. 120 workers consume 720 kg of rice in 30 days. How many days will 90 workers take to consume 270 kg of rice?
- 18
  - 12
  - 9
  - 15

30. A can complete a piece of work in 12 days, and B can do it in 18 days. They worked together for 4 days. Then, C finished the remaining work alone in 6 days. If they received a total of Rs. 3,240 for the entire work, what is C's share?  
a) Rs. 1,080  
b) Rs. 1,440  
c) Rs. 720  
d) Rs. 1,170
31. If a person's walking pace is three-quarters of what it usually is, they arrive at their workplace 20 minutes behind schedule. Determine their typical travel duration.  
a) 2 hours  
b) 1 hour  
c) 3 hours  
d) 1.5 hours
32. A 60 meter long train is moving at a speed of 36 kilometers per hour. How much time will it take to pass a stationary pole alongside the track?  
a) 9 seconds  
b) 8 seconds  
c) 7 seconds  
d) 6 seconds
33. A train of 240 meters in length crosses a stationary post in 16 seconds. What is the train's speed in kilometers per hour?  
a) 50  
b) 52  
c) 54  
d) 56
34. An airplane travels a specific distance at a speed of 240 kmph and takes 5 hours. If the same distance needs to be covered in one and two-thirds hours, what should the new speed be in kmph?  
a) 300  
b) 360  
c) 600  
d) 720

35. Excluding any stops, a bus travels at 54 kmph. Including all the stops, its speed averages to 45 kmph. For every hour of travel, how many minutes does the bus spend stopped?  
a) 9  
b) 10  
c) 12  
d) 20
36. A train moving at a speed of 60 kmph takes 9 seconds to pass a pole. What is the length of the train in meters?  
a) 120  
b) 180  
c) 324  
d) 150
37. A train that is 125 meters long overtakes a person running at 5 kmph in the same direction as the train, and the process takes 10 seconds. What is the speed of the train in kmph?  
a) 45  
b) 50  
c) 54  
d) 55
38. A train 240 meters in length takes 24 seconds to pass a stationary pole. How much time will this same train take to completely pass a platform that is 650 meters long?  
a) 65 sec  
b) 89 sec  
c) 100 sec  
d) 150 sec
39. A person's speed going with the water current is 15 kmph, and the speed of the current itself is 2.5 kmph. What is the person's speed when moving against the current?  
a) 8.5 kmph  
b) 9 kmph  
c) 10 kmph  
d) 12.5 kmph

40. In one hour, a boat travels 11 kmph downstream and 5 kmph upstream. What is the speed of the boat in still water in kmph?  
a) 3  
b) 5  
c) 8  
d) 9
41. After traveling 14 kilometers towards the west, Madhuri made a left turn and journeyed for 6 kilometers. Subsequently, she turned left again and traveled 26 kilometers. What is the straight-line distance between Madhuri's final location and her initial starting point?  
a) The square root of 180 kilometers  
b) The square root of 80 kilometers  
c) The square root of 100 kilometers  
d) None of these
42. Sohan drove 15 kilometers towards the west from his residence. He then made a left turn and drove for 20 kilometers. Following this, he turned towards the east and drove 25 kilometers. Finally, he made a left turn and covered another 20 kilometers. How far is Sohan from his house now?  
a) 40 kilometers  
b) 80 kilometers  
c) 5 kilometers  
d) 10 kilometers
43. If someone concludes their journey at a particular point and needs to return to their starting point, in which cardinal direction should they proceed? (This question is based on a general scenario without specific movements).  
a) North  
b) South  
c) East  
d) Ambiguous

44. Shahrukh started driving from location A and traveled 12 kilometers towards the north. He then turned to his right and drove 20 kilometers. After this, he took a left turn and drove 8 kilometers. Finally, he made a left turn and drove 20 kilometers, stopping at point. What is the distance of point A with respect to point B?
- 1 K4 CO5
- a) 18 kilometers
  - b) 20 kilometers
  - c) 35 kilometers
  - d) 25 kilometers
45. Before Shahrukh came to a halt at point B, after starting from point A and driving 12 km north, then 20 km east, then 8 km north, and finally 20 km west, in which general direction was he traveling?
- 1 K4 CO5
- a) Northwest
  - b) South
  - c) Southeast
  - d) West
46. Sonu initially walked 25 meters towards the south, then made a left turn and walked 45 meters. Following this, he took another left turn and walked 25 meters. Lastly, he turned to his right and walked 20 meters before stopping. What is the total straight-line distance and the direction of Sonu from his original starting point?
- 1 K4 CO5
- a) 45 meters towards the South
  - b) 50 meters towards the West
  - c) 65 meters towards the East
  - d) 20 meters towards the North
47. Salman and Aamir both started from the same location. Salman walked 5 kilometers to the east, while Aamir walked 5 kilometers to the west. Subsequently, Salman made a left turn, and Aamir made a right turn, and both walked 5 kilometers before stopping. What is the distance between Salman's and Aamir's final stopping points?
- 1 K4 CO5
- a) 10 kilometers
  - b) 15 kilometers
  - c) 5 kilometers
  - d) Cannot be determined

48. Sita walked 10 kilometers towards the west, then turned towards the south and walked 10 kilometers. Next, she turned east and walked 10 kilometers, and finally turned north and walked 10 kilometers. How far is Sita from her initial starting point? 1 K4 CO5
- a) 20 kilometers
  - b) 40 kilometers
  - c) 10 kilometers
  - d) 0 kilometers
49. Laxmi traveled 10 kilometers to the west from her residence, then turned left and walked 20 kilometers. Following this, she turned east and walked 25 kilometers, and finally turned left and covered 20 kilometers. How far was Laxmi from her house? 1 K4 CO5
- a) 10 kilometers
  - b) 15 kilometers
  - c) 5 kilometers
  - d) 40 kilometers
50. Ashok began walking towards the south for 50 meters. He then made a right turn and walked 30 meters. Following this, he took another right turn and walked 100 meters. He then took a right turn again and walked 30 meters before stopping. What is the straight-line distance and the direction of Ashok from his initial starting point? 1 K4 CO5
- a) 50 meters South
  - b) 150 meters North
  - c) 180 meters East
  - d) 50 meters North

PART – B

Answer ALL Questions

(5 x 4 = 20 marks)

| Q.No.  | Questions  | Marks | KL | CO  |
|--------|--|-------|----|-----|
| 51. a) | <b>Directions (1-2): Study the following information and Answer the questions below:</b> | 4     | K4 | CO5 |

Gopi starts walking towards the south and walks for 15 m. Then, he turns right and walks for 10 m to reach market. Then, he takes two consecutive left turns and walks for 3 m to reach office and 4 m to reach Hotel respectively.

1. If Gopi's friend Ramu is 6 m east of Gopi's starting point, then Ramu is in which direction with respect to Market?

- a) Northeast
- b) East
- c) West
- d) Northwest

2. If Sobi is 3 m south of Hotel, then what is the shortest distance between Sobi and Office?

- a) 4 m
- b) 6 m
- c) 2 m
- d) 5 m

(OR)

|    |   |   |    |     |
|----|---|---|----|-----|
| b) | <b>Direction (1-2): Study the following information carefully and answer the below questions.</b> | 4 | K4 | CO5 |
|----|---|---|----|-----|

Eight persons viz., Q, R, T, U, W, X, Y and Z are sitting in a linear row and facing south but not necessarily in the same order. W sits at one of the extreme ends. Only three persons sit between W and X. Y sits second to the right of X. Only four persons sit between Y and R. R sits second to the left of Z. At least two persons sit between Z and T. As many persons sit to the left of T as to the right of U.

1. What is the position of Q with respect to U?

- a) Second to the left
- b) Third to the left
- c) Fourth to the right
- d) Third to the right

2. Who among the following person sits second to the left of T?

- a) X
- b) W
- c) Q
- d) J

52. a) An automobile financier claims to be lending money at simple interest, but he includes the interest every six months in calculating the principal. If he is charging an interest rate of 10 %, the effective rate of interest becomes?

4 K3 CO2

(OR)

b) If a man receives on one fourth of his capital 3 % interest on two third 5 % and on the remaining 11 %, the percentage receives on the whole is, where the capital is 1200?

4 K3 CO2

53. a) A man has 3 sons. 1st son and 2nd son can complete a work in 24 and 36 days. In how many days the 3rd son will complete the work if the man could alone complete the whole work in  $3\frac{3}{11}$  days. The man can do double the work in same time. In what time, all his sons together can complete the work?

4 K3 CO3

(OR)

b) There are two pipes A and B. If A filled 10 liters in an hour, B can fill 20 liters in same time. Likewise B can fill 10, 20, 40, 80, and 160. If B filled  $\frac{1}{16}$  of a tank in 3 hours, how much time will it take to fill the tank completely?

4 K3 CO3

54. a) B takes 3 steps forward and 1 step backward while walking. He walks up a stationary escalator in 118 seconds. If it takes a total of 40 sec to reach the top when the escalator is moving, then find the speed of the escalator approximately.

4 K4 CO3

(OR)

- b) Two trains of equal length 120 metres move in the same direction. The faster train completely overtakes the slower one in 15 seconds. If the slower train were to move at half its speed, the overtaking would take in 10 seconds. At what speeds are the 2 trains moving faster and slower respectively in metre per sec. 4 K4 CO3

55. a) **Directions (1-2): Study the following information and Answer the questions below:** 4 K4 CO5

Praveen starts walking from his college towards his house in north direction and walks 6 km, then turns left and walks 3 km, then turns left again and walks 5 km to point A, then he turns to his right and walks 4 km, then turns left and walks 3 km to reach point B and then turns to his left again and walks 6 km, then turns to his right and walks 12 km and finally turns right and walks 5 km and thus reaches the front gate of his house.

1. What is the shortest distance between A and B?
2. Praveen's house is in what direction with respect to his college.

(OR)

- b) **Directions (1-2): Study the following information and Answer the questions below:** 4 K4 CO5

Point R is 10 m North of point A. Point K is exactly in the middle of the points R and A. Point N is 7 m East of point A. Point M is 7 m East of point K. Point S is 6 m North of point M.

1. What is the distance between points S and N?
2. Town D is towards East of town F. Town B is towards North of town D. Town H is towards South of town B. Towards which direction is town H from town F?

PART – C

Answer ALL Questions

(2 x 15 = 30 marks)

| Q.No.  | Questions   | Marks | KL | CO  |
|--------|---|-------|----|-----|
| 56. a) | Can you unravel five distinct types of sentence completion and showcase three illustrative examples for each? | 15    | K2 | CO1 |

(OR)

|    |   |    |    |     |
|----|---|----|----|-----|
| b) | Imagine you are the Head Manager at XYZ Pvt Ltd. How would you craft an email encouraging your employees to participate in an upcoming charity event or volunteer opportunity, using Gen Z lingo. | 15 | K2 | CO1 |
|----|---|----|----|-----|

|        |   |    |    |     |
|--------|---|----|----|-----|
| 57. a) | <b>Direction (1-5): Answer the following questions based on the details provided.</b> | 15 | K4 | CO5 |
|--------|---|----|----|-----|

Eight individuals—Sumit, Rajat, Ranjeet, Bipin, Prem, Dipak, Budlu, and Niraj—are seated around a circular table facing inward, though not necessarily in the same order. Each person works for a different software company, including IBM, TCS, L&T, Wipro, Syntel, Oracle, Google, and Accenture, but their seating arrangement does not follow this order.

Here are the key clues:

There is exactly one person between Prem and the person who works for IBM.

Sumit sits second to the left of the person who works for IBM.

Niraj is seated next to Ranjeet.

Ranjeet is neither seated next to Sumit nor Prem, and does not work for Oracle.

Prem sits second to the left of the person who works for Oracle.

There are three people seated between the individuals working for TCS and L&T.

Dipak sits second to the left of the person who works for L&T.

Niraj does not work for Wipro.

The person working for Wipro is not seated next to Niraj.

Bipin sits immediately to the left of the person working for Wipro.

The person working for Google sits immediately to the right of the person working for Accenture.

There are two people seated between Budlu and the person working for Oracle.

The person working for TCS sits second to the right of Niraj.

1. Who sits opposite of Dipak?

- a) Bipin
- b) Rajat
- c) Budlu
- d) Prem
- e) None of these

2. How many persons sit between Bipin and Ranjeet?

- a) None
- b) Two
- c) Three
- d) Four
- e) None of these

3. Who joined Wipro?

- a) Dipak
- b) Sumit
- c) Bipin
- d) Ranjeet
- e) None of these

4. Bipin joined in which of the software company?

- a) Google
- b) TCS
- c) L&T
- d) Oracle
- e) None of these

5. Which of the following is true?

- a) Budlu- Google
- b) Rajat- TCS
- c) Sumit- IBM
- d) Dipak- Accenture
- e) None of these

(OR)

- b) **Direction (1-5): Based on the clues provided, answer the following questions.** 15 K4 CO5

Eight individuals—P, Q, R, S, W, X, Y, and Z—are seated around a circular table, all facing inward, though not necessarily in the same order. Each person hails from a different state: Assam, Goa, Tamil Nadu, Bihar, Madhya Pradesh, Uttar Pradesh, West Bengal, and Tripura, though their seating arrangement doesn't follow this order.

Clues to decode the puzzle:

W and Z are not from Bihar or West Bengal.

Z is seated next to Q, and R is from Goa.

X is positioned second to the right of Y.

P is from Uttar Pradesh.

S hails from Tripura.

X is not from Assam or Bihar.

The person from Bihar is seated immediately left of the person from Tamil Nadu.

Y is not from Tamil Nadu.

P and the person from Goa sit opposite each other.

No one is seated between the person from Tripura and the person from Assam.

Three people are seated between W and Y.

1. Who is from Bihar?

- a) Y
- b) P
- c) W
- d) Z
- e) None of these

2. W is from which state?

- a) Goa
- b) Madhya Pradesh (M.P.)
- c) Assam
- d) Bihar
- e) Tamil Nadu

3. Who sits opposite of Z?

- a) T
- b) P
- c) X
- d) Z
- e) Y

4. How many persons sitting between Tamilnadu and West Bengal?

- a) Zero
- b) One
- c) Two
- d) Four
- e) Three

5. Z is from which state?

- a) Goa
- b) Uttar Pradesh (U.P.)
- c) Assam
- d) Bihar
- e) Tripura